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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,505	08/25/2003	Karl-Franz Reinhart	10191/3190	4222

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EXAMINER

NOORI, MAX H

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,505

Applicant(s)

REINHART ET AL.

Examiner

Max Noori

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 2-17 are objected as having terms, which are not appropriately defined.

For example, regarding claim 2, it is not clear as a cutout has a direction.

Regarding claim 3, it is unclear as how a stress zone and weakening zones can be *both* provided over the entire thickness.

The correction is required.

The following action is based on examiner best and broadest interpretation of the claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al., in view of Brereton et al.

Regarding claim 1, Jacobsen et al., discloses a field base movement sensor with features of the claimed invention including a substrate (element 4, see col. 5, line 37), having a plane and wherein a predetermined direction of force measurement is parallel to the substrate plane (see figures 1 and 2). Jacobsen uses a plurality of force base sensors (to measure stress, strain compression or tension, see for example, col. 5, lines 8-10, col. 6, lines 1-2), and uses one kind of sensor i.e., magnetic field effect strain transducer (for example, col. 10 lines 1-2) and does not show the use of piezoresistor. It is notoriously known that stain, and in general, force transducers come in different varieties, and they produce similar final effect and do the same job. Therefore, examiner takes official notice equivalency between a piezobase force sensor and other kinds of force sensor. Moreover, Brereton et al., is presented show the use of piezoresistor as strain sensor (see col. 7, line 23, and see claim 6). It would have been obvious, therefore, for a skilled artisan at the time of the invention to modify Jacobsen et al., to use any kind of suitable force sensors such as piezoresistors in order to provide for more accurate and less complicated force measurement system.

Regarding claim 2, Jacobsen et al.'s substrate includes various cutouts perpendicular to the direction of the force.

Regarding claim 3, in the absence of clear definition of the various zones, Jacobsen et al.'s, substrate has the end zones which can be called stress zone and the central zone that can be called weakening zone.

Regarding claim 4, the zone are adjacent each other.

Regarding claims 5-6, the middle zone (the weakening zone) has cutouts.

Regarding claim 7, the cutout is a hole.

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Regarding claim 8, the cutouts are generally rectangular.

Regarding claim 9, the weakening zone goes along the central and longitudinal edge of the plane.

Regarding claims 10-12, the end regions of the substrate are the force introducing portions, which are integral with the substrate. Also, Jacobsen et al., shows various structures for the substrate including an integrated structure along with spring means (see figure 8, col. 8, line 30), and triangular shape (see figure 11b) and other configurations (for example, figures 11a and 11c).

Regarding claims 13-15, 18 and 20, Jacobsen et al., suggests variety of silicon and other material for the substrate as micromachined elements (col. 5, lines 37-47).

Regarding claims 16-17, the sensor is used for compression or tension pressure forces (col. 5, lines 8-9).

Regarding claims 19 and 21, Brereton et al., shows Wheatstone bridge arrangement. (see claim 7).

Response to Amendment

3. Applicant's amendment and arguments filed 5/26/05 have been fully considered but they are moot in view of the new ground of rejection. The inclusion of an alternative force sensor when all other elements of the claimed invention are presented in the prior art fails to provide for an unobvious advantage or patentable distinction over other kind of force sensor. Such modification is well within the level of an ordinary skilled artisan and is generally suggested by convenience or a desired intended use, and therefore is obvious. The objection claim should be corrected.

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4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Max H. Noori whose telephone number is (571) 272-2185. The examiner can normally be reached on Tuesday-Friday from 8:00 AM to 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The central fax number is (703) 827-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHN

Friday, June 17, 2005


MAX NOORI
PRIMARY EXAMINER